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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,160	07/11/2001	Cecil William Farrow	Farrow 39	8786

47549 7590 10/24/2005  
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EXAMINER

HA, DAC V

ART UNIT PAPER NUMBER

2634

DATE MAILED: 10/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/902,160	<b>Applicant(s)</b> FARROW, CECIL WILLIAM	
	<b>Examiner</b> Dac V. Ha	<b>Art Unit</b> 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This office action is in response to the amendment filed on 06/27/05.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-7, 10-16** are rejected under 35 U.S.C. 102(b) as being anticipated by Hirano (US 5,608,804).

**Regarding claim 1**, Hirano discloses the claimed subject matter “a coefficient generator ... based on the fractional error” in Fig. 8, 10, 11; col. 12, line 53 to col. 13, line 9; col. 13, line 45 to col. 14, line 14, in that, the error signal is “smoothed”, scaled and then utilized for updating the coefficients of the adaptive filter.

**Regarding claim 10**, see apparatus claim 1.

**Regarding claim 2**, Hirano further discloses the claimed subject matter “wherein the tracking generator further generates a reduced error by subtracting the fractional error from a stored smoothed error” in Fig. 11, elements 405, 408.

**Regarding claim 11**, see apparatus claim 2.

**Regarding claim 3**, Hirano inherently discloses the claimed subject matter “wherein the tracking generator further generates a fraction of the reduced error” in the scaling process.

**Regarding claim 13**, see apparatus claim 3.

**Regarding claim 4**, Hirano further discloses the claimed subject matter "wherein the tracking generator further generates the smoothed error from the tap coefficient error estimate and a smoothing factor" in Fig. 11.

**Regarding claim 5**, Hirano further discloses the claimed subject matter "a coefficient generator for generating tap coefficients based on the fractional error." in Fig. 7 and Fig. 17, element 347.

**Regarding claim 14**, see apparatus claim 5.

**Regarding claim 6**, Hirano further discloses the claimed subject matter "further comprising an output unit for generating a converged output signal" in Fig. 8, element 5.

**Regarding claim 15**, see apparatus claim 6.

**Regarding claim 7**, Hirano further discloses the claimed subject matter "wherein the tracking generator further generates the fractional error based on the smoothed error and a coefficient adjustment factor" in Fig. 8, 10, 11; col. 12, line 53 to col. 13, line 9; col. 13, line 45 to col. 14, line 14.

**Regarding claim 16**, see apparatus claim 7.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 8, 9, 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirano.

**Regarding claims 8-9, 17**, these claimed subject matter are rather design specific, therefore, would have been obvious to one skilled in the art.

6. **Claim 18** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

7. Applicant's arguments filed on 06/27/05 have been fully considered but they are not persuasive.

8. In the REMARKS, pages 7-9, applicant has argued "As addressed ... clarification is requested". In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the claims do not recited any particular step or method for accomplishing the error signal) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). That is, the claims (i.e. claim 10) recites:

"receiving a tap coefficient error estimate of an input data stream;  
generating a smoothed error from the estimate', and  
generating a fractional error from the smoothed error'. and  
adjusting a tap coefficient in a coefficient generator according to the fractional  
error"

Hirano, does disclose all claimed subject matter as followed. "A tap coefficient error estimate of an input data stream (Fig. 8, element 1) is received at element 4. This error estimate is "smoothed" in element 106 of Fig. 8 and the detail in Fig. 11, wherein the error estimate is "smoothed" using, i.e.  $\alpha$ ,  $\beta$ . The "smoothed error" is then supplied to element 108, Fig. 8 for generating "fractional error". The coefficient of filter 101 is adjusted based upon the fractional error 105, Fig. 8; col. 60-67. Therefore, Hirano does meet all limitation in claims.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Dac V. Ha', with a long horizontal flourish extending to the right.

Dac V. Ha  
Primary Examiner  
Art Unit 2634